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TITLE: TMPRSS2 is a tumor suppressor

DATE-ISSUED: September 3, 2002

INVENTOR-INFORMATION:

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US-CL-CURRENT: 435/4; 435/183, 435/6, 435/7.4, 435/7.92, 435/7.93, 514/1, 514/12, 514/2, 514/8, 530/350

CLAIMS:

What is claimed is:

1. A method for screening for potential cancer therapeutics which comprises: (a) performing a protease assay in the presence of a mutated TMPRSS2 polypeptide and in the presence of a compound suspected of being a cancer therapeutic, wherein the mutated TMPRSS2 polypeptide comprises a mutation which results in a polypeptide with altered protease activity when compared to the protease activity of a wild-type TMPRSS2 polypeptide comprising an amino acid sequence set forth in SEQ ID NO:2; (b) performing a protease assay in the presence of the mutated TMPRSS2 polypeptide and in the absence of said compound suspected of being a cancer therapeutic; (c) performing a protease assay in the presence of a wildtype TMPRSS2 polypeptide and in the presence of a compound suspected of being a cancer therapeutic; and (d) comparing the amount of proteolysis in each of stqps (a), (b) and (c) wherein when the presence of said compound results in an amount of proteolysis in step (a) which is nearer to that obtained in step (b) as compared to the amount in step (c) said compound is a potential cancer therapeutic.

2. A method for screening for potential cancer therapeutics which comprises: (a) performing a protease assay in the presence of a mutated TMPRSS2 polypeptide and in the presence of a compound suspected of being a cancer therapeutic, wherein the mutated TMPRS S2 polypeptide comprises a mutation which results in a polypeptide with altered protease activity when compared to the protease activity of a wild-type TMPRSS2 polypeptide comprising an amino acid sequence set forth in SEQ ID NO:2; (b) performing a protease assay in the presence of the mutated TMPRSS2 polypeptide and in the absence of said compound suspected of being a cancer therapeutic; and (c) comparing the amount of proteolysis in each of steps (a) and (b) wherein when the presence of said compound results in an amount of proteolysis in step (a) which is greater than that obtained in step (b) then said compound is a potential cancer therapeutic.